

FOSSIL TRACKING

Concepts

- Science is based on evidence and interpreting what the evidence reveals.
- We can learn about dinosaurs by looking at their tracks.
- Organisms have different structures that serve different functions in growth, survival, and reproduction.
- Fossils provide evidence about extinct plants and animals and the environment at the time of extinction.

Overview

Students will learn about how scientists hypothesize features and behavior of dinosaurs by observing fossilized footprints or tracks. Students will study models of tracks made by toy dinosaurs.

Science and Math Skills

- Observing
- Inferring
- Comparing

Time

Setup: 30 minutes to prepare several plastic shoeboxes with wet sand using different dinosaurs to make tracks.

Class: Two class periods (45-60 minutes)

Materials

Per student:

- Drawing paper
- Pencil

Per Group:

- One plastic shoe box with dinosaur tracks
- Cup of dry Plaster of Paris
- Craft spoon
- ¼ cup water
- 4 paint brushes

Setup

Using scientifically accurate dinosaur toys make tracks in wet sand in a plastic

shoebox. Use carnivores and herbivores, singly and in groups to make a variety of dinosaur scenarios. Hide the dinosaurs until the end of the activity.

Safety

- When using sand, safety goggles should be used to prevent eye irritations.
- Follow the directions from the manufacturer when using Plaster of Paris

Background

What we know about how dinosaurs might have looked like and moved is based on a variety of fossil evidence. Dinosaur tracks gives us ideas about how large they were, if they moved in groups, how fast they could move and many other things. This information is another piece in a puzzle that scientists try to piece together.

Procedure

1. Ask students questions like: Have you ever seen an animal track outside? What did the animal track look like? Could you tell what animal made the track? How?
2. Say, "We are going to study the tracks of animals that have become extinct. What does extinct mean?"
3. Place students in cooperative groups and assign roles: materials manager, recorder, and reporter.
4. The teachers should illustrate the animal tracks in one of the shoeboxes. Ask, "What do you think made these tracks? How do you know?"
5. Allow the children to share their ideas about the animals that made the tracks. The recorder should write the ideas of the group on a large sheet of white paper.
6. The reporter should talk about the ideas of the group when called on by the teacher.

7. The teacher should place the box of tracks on each table. Ask the children not to disturb the tracks or play in the sand.
8. Ask, "How can we preserve these tracks?" The children may watch forensic shows on television and be able to talk about making molds. If none of the children have experience with molds, illustrate how to make a mold.
9. The materials manager should pick up the fast drying plaster when directed to do so by the teacher.
10. When all of the groups have the plaster, provide step-by-step instructions following the directions on the box.
11. The materials manager should carefully place the shoebox where the mold can dry overnight.
12. On the next day, have the students brush away excess sand with a paint brush very gently to reveal the tracks.
13. Ask the children to draw the tracks on paper and write observations. Ask the children to infer the type of animal that made the tracks and what the animal might eat, do during the day, do during the night, etc.
14. Ask the children to share their ideas about the animals that made the tracks, providing a rationale for their ideas.
15. Reveal what was used to make the tracks and discuss how this process was similar to how real paleontologists study dinosaur tracks.

Extension: Use dinosaur flip book to talk about how dinosaurs move.

<http://www.fieldmuseum.org/sue/justforkids.asp>

Websites:

http://www.bcmuseumofmining.org/pdfs/The_Discovery_Resource.pdf

<http://education.usgs.gov/schoolyard/dinosaurtracks.html>

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